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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/795,925	03/08/2004	David G. Mehuys	78307CIP1 (P1269 US CIP)	1786

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EXAMINER	
FLORES RUIZ, DELMA R	

ART UNIT	PAPER NUMBER
2828	

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/795,925	MEHUYS ET AL.	
	Examiner	Art Unit	
	Delma R. Flores Ruiz	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4,7,10 and 22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4,7,10 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 April 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings were received on 04/11/2006. These drawings are considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 4, 7, 10 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 4, 7, 10 and 22, the applicant recited: "reflectivity filter having a ***reflectivity profile having reflectivity peat at two predetermined spaced wavelength within the operating wavelength of the laser in the absence of said filter'.*** This limitation it is not clear within the claim language,

what the applicant means when mention "reflectivity profile having reflectivity peat at two predetermined spaced wavelength within the operating wavelength of the laser in the absence of said filter", ***h***ow obtained the profile when the filter is absence and if the inventions have more then one filter, what type of filter the applicant one talks about. Corre***ction is required.***

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4, 10 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Koch et al. (6,295,304).

Regarding claim 4, Koch discloses in Figures 1 A-D a laser system, comprising: a laser element (see Fig. 1 A-D, Character 15) having a laser signal output, the wavelength profile of which changes with a change in operating conditions; and a wavelength-selective (Column 3, Lines 32 – 40) stabilizing reflective filter (see Fig. 1A-

D, Characters 12 and 14, Column 7, Lines 2 – 3, the reference call 'grating") in line with the laser for receiving the laser signal, said reflective filter (see Fig. 1A-D-E, Characters 12 and 14) having a reflectivity profile having reflectivity peaks at predetermined spaced wavelengths (see Fig. 1A-D, Column 3, Lines 42 – 65, Column 4, Lines 39 – 55), the reflective filter being partially reflective (Column 2, Lines 31 – 32) at said different predetermined reflective spaced wavelengths and substantially less reflective in a wavelength band there between, and providing optical feedback (Column 4, Lines 31 – 55, Column 7, Lines 22 – 42) of a portion of the laser signal to the laser element that wavelength-stabilizes its output (Column 3, Lines 24 – 33), a degree of reflectivity at said predetermined wavelengths (Column 12, Lines 1 – 8) and a relative wavelength separation between the predetermined spaced wavelengths being such that throughout the change in operating conditions (see Fig. 1A-D), output power of the laser element is concentrated at one or more of the reflector center wavelengths (see Figs. A-D Characters 12 and 14), with regions of negligible output power at wavelength sections between the reflector center wavelengths (Column 2, Lines 29 – 32 and Column 3, Lines 50 - 57), wherein the laser system is without active cooling, see (see Figs.1 A-D)

Regarding claim 10, Koch discloses in Figures 1 A-D and 2A-C a laser system, comprising: a laser element (see Fig. 1 A-D, Character 15) having a laser signal output, the wavelength profile of which changes with a change in operating conditions; and a wavelength-selective (Column 3, Lines 32 – 40) stabilizing reflective filter (see Fig. 1A-

D, Characters 12 and 14, Column 7, Lines 2 – 3, the reference call 'grating") in line with the laser for receiving the laser signal, said reflective filter (see Fig. 1A-D-E, Characters 12 and 14) having a reflectivity profile having reflectivity peaks at predetermined spaced wavelengths (see Fig. 1A-D, Column 3, Lines 42 – 65, Column 4, Lines 39 – 55), the reflective filter being partially reflective (Column 2, Lines 31 – 32) at said different predetermined reflective spaced wavelengths and substantially less reflective in a wavelength band there between, and providing optical feedback (Column 4, Lines 31 – 55, Column 7, Lines 22 – 42) of a portion of the laser signal to the laser element that wavelength-stabilizes its output (Column 3, Lines 24 – 33), a degree of reflectivity at said predetermined wavelengths (Column 12, Lines 1 – 8) and a relative wavelength separation between the predetermined spaced wavelengths being such that throughout the change in operating conditions (see Fig. 1A-D), output power of the laser element is concentrated at one or more of the reflector center wavelengths (see Figs. A-D Characters 12 and 14), wherein the reflective filter comprise two filters (see Figs. A-D Characters 12 and 14 and see Fig. 2A Characters 12 and 14) having a reflectivity peak at one of the predetermined spaced wavelength Column 3, Lines 42 – 65, Column 4, Lines 39 – 55), and the other of the filter (see Figs. A-D Characters 12 and 14 and see Fig. 2A Characters 12 and 14) having reflectivity peat at the other of the predetermined spaced wavelength and wherein the degree of reflectivity of each of the reflectivity filter is approximately equal (Column 9, Lines 54 – 62 and Column 10, Lines 39 – 55).

Regarding claim 22, Koch discloses in Figures 1 A-D a laser system, comprising: a laser element (see Fig. 1 A-D, Character 15) having a laser signal output, the wavelength profile of which changes with a change in operating conditions; and a wavelength-selective (Column 3, Lines 32 – 40) stabilizing reflective filter (see Fig. 1A-D, Characters 12 and 14, Column 7, Lines 2 – 3, the reference call 'grating") in line with the laser for receiving the laser signal, said reflective filter (see Fig. 1A-D-E, Characters 12 and 14) having a reflectivity profile having reflectivity peaks at predetermined spaced wavelengths (see Fig. 1A-D, Column 3, Lines 42 – 65, Column 4, Lines 39 – 55), the reflective filter being partially reflective (Column 2, Lines 31 – 32) at said different predetermined reflective spaced wavelengths and substantially less reflective in a wavelength band there between, and providing optical feedback (Column 4, Lines 31 – 55, Column 7, Lines 22 – 42) of a portion of the laser signal to the laser element that wavelength-stabilizes its output (Column 3, Lines 24 – 33), a degree of reflectivity at said predetermined wavelengths (Column 12, Lines 1 – 8) and a relative wavelength separation between the predetermined spaced wavelengths being such that throughout the change in operating conditions (see Fig. 1A-D), output power of the laser element is concentrated at one or more of the reflector center wavelengths (see Figs. A-D Characters 12 and 14), with regions of negligible output power at wavelength sections between the reflector center wavelengths (Column 2, Lines 29 – 32 and Column 3, Lines 50 - 57), and comprising a gain medium (see Fig. 1A-D, Column 1, Lines 66 – 67, Column 2, Lines 1 – 10) optically coupled with the laser element for receiving pump

energy therefrom and further comprising an optical isolator (see Figure 4A, Column 12, Lines 41 – 54) in an optical path with the gain medium.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koch et al (6,295,304) in view of Tatsuno el al (US 2003/0002050).

Regarding claims 7, Koch discloses in Figures 1 A-D a laser system, comprising: a laser element (see Fig. 1 A-D, Character 15) having a laser signal output, the wavelength profile of which changes with a change in operating conditions; and a wavelength-selective (Column 3, Lines 32 – 40) stabilizing reflective filter (see Fig. 1A-D, Characters 12 and 14, Column 7, Lines 2 – 3, the reference call 'grating") in line with the laser for receiving the laser signal, said reflective filter (see Fig. 1A-D-E, Characters 12 and 14) having a reflectivity profile having reflectivity peaks at predetermined spaced

wavelengths (see Fig. 1A-D, Column 3, Lines 42 – 65, Column 4, Lines 39 – 55), the reflective filter being partially reflective (Column 2, Lines 31 – 32) at said different predetermined reflective spaced wavelengths and substantially less reflective in a wavelength band there between, and providing optical feedback (Column 4, Lines 31 – 55, Column 7, Lines 22 – 42) of a portion of the laser signal to the laser element that wavelength-stabilizes its output (Column 3, Lines 24 – 33), a degree of reflectivity at said predetermined wavelengths (Column 12, Lines 1 – 8) and a relative wavelength separation between the predetermined spaced wavelengths being such that throughout the change in operating conditions (see Fig. 1A-D), output power of the laser element is concentrated at one or more of the reflector center wavelengths (see Figs. A-D Characters 12 and 14), with regions of negligible output power at wavelength sections between the reflector center wavelengths (Column 2, Lines 29 – 32 and Column 3, Lines 50 - 57), wherein the laser system is without active cooling, see (see Figs.1 A-D) and wherein the degree of reflectivity of each of the reflective filters is approximately equal (see Fig. 8A – 8B).

Koch discloses the claimed invention except for wavelength selective reflection filter includes wavelength selective dielectric coating. However, it is well know in the art to apply the wavelength selective reflection filter includes wavelength selective dielectric coating as discloses by Tatsuno in (Paragraph [0005]). Therefore, it would have been obvious to a person having ordinary skill in the art to apply the well know wavelength selective reflection filter includes wavelength selective dielectric coating as suggested

by Tatsuno to the laser of Koch, because it will could be used to introduced so as to perform a feedback operation on the operating temperature of the semiconductor laser and to fix a wavelength. The characteristics that transmission peaks repeatedly appear according to the degree of multiplex interferences see (Paragraph [0005]) of Tatsuno.

Response to Arguments

Applicant's arguments with respect to claims 4, 7,10 and 22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (571) 272-1940. The examiner can normally be reached on M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Sun Harvey can be reached on (571) -272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Delma R. Flores Ruiz
Examiner
Art Unit 2828

Min Sun Harvey
Supervisor Patent Examiner
Art Unit 2828

DRFR/MH
June 26, 2006